WEST

| Help | Logout | Interrupt |

| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases |

Search Results -

Terms	Documents
(((364/$)!.CCLS.))	0

Database:
- US Patents Full-Text Database
- US Pre-Grant Publication Full-Text Database
- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search: [ ]

| Refine Search |

| Recall Text | Clear |

Search History

DATE: Wednesday, February 12, 2003   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L55	(((364/$)!.CCLS.))	0	L55
L54	(((706/52)!.CCLS.))	371	L54
L53	(((706/$)!.CCLS.))	5053	L53
L52	(((705/30)!.CCLS.))	473	L52
L51	(((705/28)!.CCLS.))	740	L51
L50	(((705/26)!.CCLS.))	2055	L50
L49	(((705/7)!.CCLS.))	778	L49
L48	(((707/201)!.CCLS.))	731	L48
L47	(((707/100)!.CCLS.))	1409	L47
L46	(((707/$)!.CCLS.))	14297	L46
L45	(((705/$)!.CCLS.))	18209	L45
L44	(((705/16)!.CCLS.))	541	L44
L43	(((705/5)!.CCLS.))	355	L43
L42	(((705/44)!.CCLS.))	303	L42
L41	(((705/39)!.CCLS.))	710	L41

2/12/03 11:16 AM

L40	(((705/35)!.CCLS.))	789 L40
L39	(((705/1)!.CCLS.))	1574 L39
L38	((705/14)!.CCLS.)	1506 L38
L37	L36 and dimension$ near5 database near5 tables	2 L37
L36	L35 and report	88 L36
L35	L34 and customer near5 profile	111 L35
L34	L33 and code	939 L34
L33	data near3 warehouse	1567 L33
L32	datawarehous$	9 L32

DB=USPT; PLUR=YES; OP=OR

L31	4972504.pn.	1 L31
L30	5036314.pn.	1 L30
L29	5168445.pn.	1 L29
L28	5191522.pn.	1 L28
L27	5299115.pn.	1 L27
L26	5615109.pn.	1 L26
L25	5644723.pn.	1 L25
L24	5715450.pn.	1 L24
L23	5721903.pn.	1 L23
L22	5758355.pn.	1 L22
L21	5787437.pn.	1 L21
L20	5794246.pn.	1 L20
L19	5854746.pn.	1 L19
L18	5873096.pn.	1 L18
L17	5893075.pn.	1 L17
L16	6151601.pn.	1 L16
L15	6167405.pn.	1 L15
L14	5386556.pn.	1 L14
L13	5550971.pn.	1 L13
L12	5659724.pn.	1 L12
L11	5675785.pn.	1 L11
L10	5806060.pn.	1 L10
L9	5995958.pn.	1 L9
L8	6212524.pn.	1 L8

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR

L7	5794246.uref.	10 L7
L6	599286.uref.	1 L6

DB=USPT; PLUR=YES; OP=OR

L5	5808612.pn.	1 L5
L4	5808612.pn.	1 L4
L3	6112209.pn.	1 L3

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR

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L2   5767854.uref. ●

L1   5767854.pn.

END OF SEARCH HISTORY

●   20   L2

2   L1

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| Help | Logout | Interrupt |

| Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases |

Search Results -

Terms	Documents
5794246.uref.	10

Database:

US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

| Refine Search |

| Recall Text | Clear |

Search History

DATE: **Wednesday, February 12, 2003**   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L7	5794246.uref.	10	L7
L6	599286.uref.	1	L6
DB=USPT; PLUR=YES; OP=OR			
L5	5808612.pn.	1	L5
L4	5808612.pn.	1	L4
L3	6112209.pn.	1	L3
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L2	5767854.uref.	20	L2
L1	5767854.pn.	2	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 6385301 B1

L37: Entry 1 of 2   File: USPT   May 7, 2002

US-PAT-NO: 6385301
DOCUMENT-IDENTIFIER: US 6385301 B1

TITLE: Data preparation for traffic track usage measurement

DATE-ISSUED: May 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
LaPearl; Richard	Princeton	MA		
Dion; Karen	Dudley	MA		

US-CL-CURRENT: 379/32.01; 379/112.01, 379/112.07, 379/133, 379/134, 379/32.02

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 2. Document ID: US 6351453 B1

L37: Entry 2 of 2   File: USPT   Feb 26, 2002

US-PAT-NO: 6351453
DOCUMENT-IDENTIFIER: US 6351453 B1

TITLE: Internet service provider (ISP) finder

DATE-ISSUED: February 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
Dion; Karen	Dudley	MA		
LaPearl; Richard	Princeton	MA		
Noonan; Sheila	Falmouth	MA		

US-CL-CURRENT: 370/234; 370/232, 370/233, 379/112.01, 379/133

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

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Terms	Documents
L36 and dimension$ near5 database near5 tables	2

http://westbrs:8002/bin/gate.exe?f=TOC&...SPT,PGPB,JPAB,EPAB,DWPI,TDBD&ESNAME=-

Display Format: | - | | Change Format |

Previous Page   Next Page

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US-PAT-NO: 6317750
DOCUMENT-IDENTIFIER: US 6317750 B1

TITLE: Method and apparatus for accessing multidimensional data

DATE-ISSUED: November 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tortolani; Thomas R.	Castro Valley	CA		
Nouri; Koorosh M.	Foster City	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Hyperion Solutions Corporation	Sunnyvale	CA			02

APPL-NO: 09/ 178059   [PALM]
DATE FILED: October 26, 1998

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 707/103; 707/102, 707/3, 707/4, 707/5, 345/335, 345/355
US-CL-CURRENT: 707/103R; 345/853, 707/102, 707/3, 707/4, 707/5

FIELD-OF-SEARCH: 707/3, 707/4, 707/5, 707/101, 707/103, 707/104, 707/503, 706/11, 345/335, 345/355

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5463724	October 1995	Anderson et al.	707/503
☐	5471612	November 1995	Schlafly	707/104
☐	5603021	February 1997	Spencer et al.	707/4
☐	5604854	February 1997	Glassey	707/503
☐	5680613	October 1997	Atsumi	707/103
☐	5767854	June 1998	Amwar	345/355
☐	5845270	December 1998	Schatz et al.	706/11
☐	5883623	March 1999	Cseri	345/335
☐	5918232	June 1999	Pouschine et al.	707/103
☐	6002865	December 1999	Thomsen	707/3
☐	6094651	July 2000	Agrawal et al.	707/5
☐	6112209	August 2000	Gusack	707/101

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Microsoft Excel, PivotTables: Analyzing data interactively, Release 2.1, 1997.
Oracle Corporation, Oracle Express Objects User's Guide, Release 1.2, 1997.
Oracle Corporation, Oracle Express Web Agents User's Guide, Release 1.2, 1997.

ART-UNIT: 212

PRIMARY-EXAMINER: Alam; Hosain T.

ASSISTANT-EXAMINER: Ly; Anh

ABSTRACT:

Retrieving multidimensional data from a data source and displaying the data in a
familiar and pre-existing user interface automatically propagates user-created
formulas thereby eliminating the need for users to re-enter formulas. A data
representation of the multidimensional data is sent to a query processor which
creates row and column structures. These structures are manipulated based on a user
action, such as zoom-in, and a multidimensional data output tree showing a hierarchy
of the multidimensional data. Also created is a blueprint containing instructions on
insertions and deletions to be carried out by the program associated with the
pre-existing user interface, such as a spreadsheet program. Once the blueprint is
interpreted by the program, typically through a data representation manipulator or
common spreadsheet layer, the user interface is configured to accommodate the
returned multidimensional data. Once the user interface is populated with the data,
the program, such as the spreadsheet program, adjusts the user-created formula cell
designations to reflect the new configuration.

38 Claims, 14 Drawing figures

http://westbrs:8002/bin/gate.exe?f=doc&..._2=&p_doc_3=&p_doc_4=&p_doc_5=&p_doc_6=

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File: USPT   Aug 28, 2001

US-PAT-NO: 6282546
DOCUMENT-IDENTIFIER: US 6282546 B1

TITLE: System and method for real-time insertion of data into a multi-dimensional database for network intrusion detection and vulnerability assessment

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gleichauf; Robert	San Antonio	TX		
Shanklin; Steven	San Antonio	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Cisco Technology, Inc.	San Jose	CA			02

APPL-NO: 09/ 107790   [PALM]
DATE FILED: June 30, 1998

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/102; 707/6, 713/201
US-CL-CURRENT: 707/102; 707/6, 713/201

FIELD-OF-SEARCH: 707/4, 707/6, 707/10, 707/102, 707/104, 345/355-357, 709/318, 713/200-202

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4868866	September 1989	Williams, Jr.	340/825.31
☐	4937743	June 1990	Rassman	705/8
☐	5032979	July 1991	Hecht et al.	364/200
☐	5101402	March 1992	Chiu et al.	370/17
☐	5278901	January 1994	Shieh et al.	380/4
☐	5319777	June 1994	Perez	395/600
☐	5404488	April 1995	Kerrigan et al.	711/133
☐	5414833	May 1995	Hershey et al.	395/575
☐	5448724	September 1995	Hayashi	395/182.02
☐	5488715	January 1996	Wainwright	395/182.02
☐	5524238	June 1996	Miller et al.	395/600
☐	5557742	September 1996	Smaha et al.	395/186
☐	5592666	January 1997	Perez et al.	395/600
☐	5606668	February 1997	Shwed	395/200.11
☐	5621889	April 1997	Lermuzeaux et al.	395/186
☐	5647058	July 1997	Agrawal et al.	395/601
☐	5649190	July 1997	Sharif-Askary et al.	707/1
☐	5699513	December 1997	Feigen et al.	395/187.01
☐	5721910	February 1998	Unger et al.	395/611
☐	5767854	June 1998	Anwar	345/355
☐	5768133	June 1998	Chen et al.	700/95
☐	5774878	June 1998	Marshall	705/35
☐	5793763	August 1998	Mayes et al.	370/389
☐	5796942	August 1998	Esbensen	395/187.01
☐	5798706	August 1998	Kraemer et al.	340/825.07
☐	5805801	September 1998	Holloway et al.	395/187.01
☐	5826014	October 1998	Coley et al.	395/187.01
☐	5854897	December 1998	Radziewicz et al.	709/224
☐	5919257	July 1999	Trostle	713/200
☐	5931946	August 1999	Terada et al.	713/201
☐	5978788	November 1999	Castelli et al.	707/2
☐	5991881	November 1999	Conklin et al.	713/201
☐	5999944	December 1999	Lipkin	707/104
☐	6003036	December 1999	Martin	707/102
☐	6032158	February 2000	Mukhopadhyay et al.	707/201

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ART-UNIT: 271

PRIMARY-EXAMINER: Von Buhr; Maria N.

ABSTRACT:

A system and method are disclosed for real-time insertion of data into a multi-dimensional database. The system includes a multi-dimensional database and a user interface operable to access and provide views into the multi-dimensional database. A data insertion engine is coupled to and operable to access the multi-dimensional database. The data insertion engine is further operable to receive and process a real-time data feed and to insert data into the multi-dimensional database responsive to processing of the real-time data feed. In one embodiment, the real-time data feed can represent exploited network vulnerabilities, and the system can be used for network intrusion detection and vulnerability assessment. The method includes receiving a real-time data feed representing detection of an event and processing the event against the multi-dimensional database. Cells associated with the event are identified in the multi-dimensional database and appropriate vectors to the identified cells are created. Data representing the event is then inserted at the identified cells. Visibility to the inserted data is provided through a user interface to the multi-dimensional database. In one embodiment, the event can be an exploited network vulnerability, and the method can be used for intrusion detection and vulnerability assessment.

25 Claims, 14 Drawing figures

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US-PAT-NO: 6014671
DOCUMENT-IDENTIFIER: US 6014671 A

TITLE: Interactive retrieval and caching of multi-dimensional data using view elements

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Castelli; Vittorio	White Plains	NY		
Li; Chung-Sheng	Ossining	NY		
Smith; John Richard	New Hyde Park	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corporation	Armonk	NY			02

APPL-NO: 09/ 079986   [PALM]
DATE FILED: May 15, 1998

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation of a provisional application Ser. No. 60/081,654, filed on Apr. 14, 1998. The present invention is related to co-pending patent application Ser. No. 09/079,662, entitled "Interactive Representation and Retrieval of Multi-dimensional Data Using View Elements," by Castelli et al., filed of even date herewith, IBM Docket No. YO998111. This co-pending application and the present invention are commonly assigned to the International Business Machines Corporation, Armonk, N.Y. This co-pending application is hereby incorporated by reference in its entirety into the present application.

INT-CL: [06] G09 G 5/36

US-CL-ISSUED: 707/101; 707/3, 707/100, 345/419, 345/139
US-CL-CURRENT: 707/101; 345/418, 345/419, 707/100, 707/3

FIELD-OF-SEARCH: 707/3, 707/100, 707/101, 345/419, 345/139

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐ 5384725	January 1995	Coifman et al.	364/807
☐ 5454371	October 1995	Fenster et al.	128/660.07
☐ 5555409	September 1996	Leenstra, Sr. et al.	707/101
☐ 5767854	June 1998	Anwar	345/355
☐ 5819016	October 1998	Watanabe et al.	345/119
☐ 5821925	October 1998	Carey et al.	345/331
☐ 5903271	May 1999	Bardon et al.	345/419

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ART-UNIT: 271

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Coby; Frantz

ABSTRACT:

An apparatus and method for representing and retrieving multi-dimensional data such as large satellite images. Images are stored in forms that can be rapidly browsed and retrieved by remote client applications in a drill-down or roll-up fashion. The data can be represented and retrieved using a view element data structure that includes node elements and transition elements between nodes. The data is decomposed (in space or spatial-frequency to construct a tree-based or graph-based data structure) into view elements. A set of view elements is selected, compressed and stored without adversely impacting image view extraction or generation speed. View elements are placed into the node elements of the data structure and the transition elements indicate the processing to generate other view elements in the data structure. In a server-side view construction, the view elements are selectively retrieved from storage, decompressed, and processed to generate the views of the data. In a client-side progressive view construction, the client caches the view elements and processes them in combination with view elements retrieved from the server to generate views of the data. The data reuse at the client reduces data transmission in drill-down or roll-up browsing. Data can be ingested, read and written in units of spatial blocks and decomposed into view elements using the spatial block units. Thus, the ingestion, decomposition, compression, and view retrieval for large images can be done using computer devices that have limited storage and processing capabilities.

19 Claims, 9 Drawing figures

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US-PAT-NO: 6438538
DOCUMENT-IDENTIFIER: US 6438538 B1

TITLE: Data replication in data warehousing scenarios

DATE-ISSUED: August 20, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Goldring; Robert David	Morgan Hill	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corporation	Armonk	NY			02

APPL-NO: 09/ 413945   [PALM]
DATE FILED: October 7, 1999

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/3; 707/4
US-CL-CURRENT: 707/3; 707/4

FIELD-OF-SEARCH: 707/3, 707/2, 707/1, 707/101, 707/102, 707/201, 707/202, 707/100, 707/4, 707/5

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected] [Search ALL]

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5675785	October 1997	Hall et al.	707/102
☐	5706495	January 1998	Chadha et al.	707/2
☐	5794246	August 1998	Sankaran et al.	707/101
☐	5848405	December 1998	Norcott	707/1
☐	5870746	February 1999	Kuntson et al.	707/101
☐	5870761	February 1999	Demers et al.	707/201
☐	5884328	March 1999	Mosher, Jr.	707/202
☐	6029163	February 2000	Ziauddin	707/2
☐	6289334	September 2001	Reiner et al.	707/3

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 98/09238	March 1998	WO	
WO 98/40804	September 1998	WO	

ART-UNIT: 2174

PRIMARY-EXAMINER: Shah; Sanjiv

ABSTRACT:

A method, apparatus and program storage device for optimizing a query in a relational database management system is provided. The query including aggregate and grouping functions. An application table is preferably located in a source site and an aggregation operation is performed from a target site. After an initial aggregation operation performed from the source-based application table, the further aggregation operations are incrementally performed, by aggregating only the newly inputted relational database data into the target-based base aggregates table. This procedure allows the transformed query to perform more efficiently than the original query, while providing same results.

24 Claims, 3 Drawing figures

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Search Results - Record(s) 1 through 1 of 1 returned.

☐   1.   Document ID: US 6212524 B1

L8: Entry 1 of 1   File: USPT   Apr 3, 2001

US-PAT-NO: 6212524
DOCUMENT-IDENTIFIER: US 6212524 B1

TITLE: Method and apparatus for creating and populating a datamart

DATE-ISSUED: April 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weissman; Craig David	Belmont	CA		
Walsh; Gregory Vincent	Cupertino	CA		
Slater, Jr.; Lynn Randolph	Fremont	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
E.piphany, Inc.	San Mateo	CA			02

APPL-NO: 09/ 073752
DATE FILED: May 6, 1998

PARENT-CASE:
CROSS REFERENCES TO RELATED APPLICATIONS This application relates to the following
group of applications. Each application in the group relates to, and incorporates by
reference, each other application in the group. The invention of each application is
assigned to the assignee of this invention. The group of applications includes the
following. U.S. patent application Ser. No. 09/385,119, entitled "Method and
Apparatus for Creating a Well-Formed Database System Using a Computer," filed Aug.
27, 1999, and having inventors Craig David Weissman, Greg Vincent Walsh and Eliot
Leonard Wegbreit. U.S. patent application Ser. No. 09/073,752, entitled "Method and
Apparatus for Creating and Populating a Datamart," filed May 6, 1998, and having
inventors Craig David Weissman, Greg Vincent Walsh and Lynn Randolph Slater, Jr.
U.S. patent application Ser. No. 09/073,733, entitled "Method and Apparatus for
Creating Aggregates for Use in a Datamart," filed May 6, 1998, and having inventors
Allon Rauer, Gregory Vincent Walsh, John P. McCaskey, Craig David Weissman and
Jeremy A. Rassen. U.S. patent application Ser. No. 09/073,753, entitled "Method and
Apparatus for Creating a Datamart and for Creating a Query Structure for the
Datamart," filed May 6, 1998, and having inventors Jeremy A. Rassen, Emile Litvak,
abhi a. shelat, John P. McCaskey and Allon Rauer.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/101; 707/3
US-CL-CURRENT: 707/101; 707/3

FIELD-OF-SEARCH: 707/1-10, 707/100-104, 707/200-206

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
5386556	January 1995	Hedin et al.	707/4
5550971	August 1996	Brunner et al.	707/3
5659724	August 1997	Borgida et al.	707/3
5675785	October 1997	Hall et al.	707/102
5806060	September 1998	Borgida et al.	707/3
5995958	November 1999	Xu	707/3

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ART-UNIT: 271

PRIMARY-EXAMINER: Ho; Ruay Lian

ABSTRACT:

A method of generating a datamart is described. The datamart includes tables having rows and columns. The method comprises accessing a description of a schema. The schema defines the relationships between the tables and columns. The description further defines how data is to be manipulated and used to populate the tables in the datamart. That is, the description defines the semantic meaning of the data. The description is further used to create a set of commands to create the tables. The commands are executed causing the creation of the tables. Importantly, when the semantic meaning is associated with the column and rows, programs for manipulating and propagating data into those columns and rows are automatically defined. Previously, consultants would have to hand code the creation, manipulation, and population programs for a datamart. Thus, the amount of work required to create and populate the datamart is significantly reduced.

21 Claims, 48 Drawing figures

CLS.1   REF.1 SEQ.1 ATT.1

Full | Title

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L11: Entry 1 of 1   File: USPT   Oct 7, 1997

US-PAT-NO: 5675785
DOCUMENT-IDENTIFIER: US 5675785 A

TITLE: Data warehouse which is accessed by a user using a schema of virtual tables

DATE-ISSUED: October 7, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hall; Guy Travis	Loomis	CA		
Sturdevant; Mark	San Jose	CA		
Yee; Suzie Cho	Cupertino	CA		
Fong; Yukon	Union City	CA		
Yoshida; Neil	Sunnyvale	CA		
Randazzo; Guy	Rocklin	CA		
Gratiot; Mark	Forest Hill	CA		
Meyer; Marc	Granite Bay	CA		
Fischer; Brian	Mokelumne Hill	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Hewlett-Packard Company	Palo Alto	CA			02

APPL-NO: 08/ 317437   [PALM]
DATE FILED: October 4, 1994

INT-CL: [06] G06 F 17/30

US-CL-ISSUED: 395/613; 395/601, 395/602, 395/604, 395/611
US-CL-CURRENT: 707/102; 707/1, 707/100, 707/2, 707/4

FIELD-OF-SEARCH: 395/600, 395/148, 395/155-161, 395/159, 395/160, 395/601, 395/602, 395/604, 395/611, 395/613

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

	PAT-NO	ISSUE DATE	PATENTEE-NAME	US-CL
☐	4819160	April 1989	Tanka et al.	395/600
☐	5276870	January 1994	Shan et al.	395/600
☐	5418950	May 1995	Li et al.	395/600
☐	5418957	May 1995	Narayan et al.	395/700
☐	5428776	June 1995	Rothfield	395/600
☐	5448726	September 1995	Crimsie et al.	395/600
☐	5448727	September 1995	Annevelinbk	395/600
☐	5504885	April 1996	Alashqur	395/600
☐	5519859	May 1996	Grace	395/600
☐	5550971	August 1996	Brunner et al.	395/161

OTHER PUBLICATIONS

"Client/Server accounting: accounting system based on client/server architectures increase productivity" by Stewark McKie, DBMS, V6, n2, p. 62(5); Feb., 1993.
"Using SQL:" by Que Corporation, 1993.

ART-UNIT: 237

PRIMARY-EXAMINER: Kulik; Paul V.

ASSISTANT-EXAMINER: Alam; Hosain T.

ABSTRACT:

A database warehouse includes a database having data arranged in data tables, e.g., fact tables and reference tables. A warehouse database hub interface is connected to the database. The warehouse database hub interface presents to a user a schema of the data in the database warehouse. The schema consists of virtual tables. Arrangement of the data in the virtual tables is different than arrangement of data in the fact tables and the reference tables. A user generates queries based on the schema provided by the warehouse database hub interface. In response to a such a query for particular information stored in the database warehouse, the warehouse database hub interface modifies the query to take into account pre-computed values and the arrangement of the data within the database warehouse. Then the warehouse database hub interface queries the database warehouse using the modified query to obtain the particular information from the database warehouse. Finally, the warehouse database hub interface forwards the particular information obtained from the database warehouse to the user.

26 Claims, 5 Drawing figures

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1.   Document ID: US 6167405 A

L15: Entry 1 of 1   File: USPT   Dec 26, 2000

US-PAT-NO: 6167405
DOCUMENT-IDENTIFIER: US 6167405 A

TITLE: Method and apparatus for automatically populating a data warehouse system

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rosensteel, Jr.; Kenneth R.	Phoenix	AZ		
Guhr; Jerry T	Phoenix	AZ		
Picone; Joseph K.	Phoenix	AZ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Bull HN Information Systems Inc.	Billerica	MA			02

APPL-NO: 09/ 067101
DATE FILED: April 27, 1998

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/102
US-CL-CURRENT: 707/102

FIELD-OF-SEARCH: 707/6, 707/101, 707/102, 395/785

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
5708828	January 1998	Coleman	395/785
5870746	February 1999	Knutson	707/101
5918232	June 1999	Pouschine et al.	707/103

OTHER PUBLICATIONS

"Data Warehousing An Introduction", by Grayce Booth, Groupe Bull Technical Update, Man/Jun. 1995, pp. 1-9, Copyright Jun. 1995.
"The Distributed Data Warehouse Solution", by Kirk Mosher and Ken Rosensteel, Groupe Bull Technical Update, May/Jun. 1995, pp. 11-18 Copyright Jun. 1995.
"Bull Warehouse Initiative", by Wayne W. Eckerson, Oct. 1996, Patricia Seybold Group, pp. 1-28, Copyright 1996.

ART-UNIT: 271

PRIMARY-EXAMINER: Amsbury; Wayne

ABSTRACT:

A method and system for facilitating the creation of warehouse requests in a data

warehouse system. During the design of the data warehouse tables, a repository tool is used for storing a number of new objects such as source and target databases, source and target tables and warehouse requests that are graphically defined and linked together by an administrator with the repository tool. The resulting visual design is so drawn so as to serve as input for each warehouse request to be generated. The administrator invokes a data replication component that operatively couples to the repository tool signaling that the warehouse request is to be implemented. The data replication component automatically creates the different subcomponents of the request by accessing various links stored by the repository tool and displays a visual representation of the subcomponents and their relationships to each other to the administrator. Thereafter, the replication component provides access to menu screens for enabling the administrator to visualize each of the subcomponents of the request and their properties for enabling modifications to be made to such subcomponents for completing configuration of all request subcomponents. Subsequently, the warehouse request can be scheduled to execute and populate the warehouse tables.

35 Claims, 13 Drawing figures

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image |

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Previous Page   Next Page

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US-PAT-NO: 6339775
DOCUMENT-IDENTIFIER: US 6339775 B1

TITLE: Apparatus and method for performing data transformations in data warehousing

DATE-ISSUED: January 15, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zamanian; Kiumarse	San Francisco	CA		
Nesamoney; Diaz	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Informatica Corporation	Menlo Park	CA			02

APPL-NO: 09/ 442060   [PALM]
DATE FILED: November 16, 1999

PARENT-CASE:
This application is a continuation-in-part of and claims the benefit of application Ser. No. 08/966,449 filed on Nov. 7, 1997 and which designated the U.S. Pat. No. 6,014,670.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/101; 707/100, 707/103
US-CL-CURRENT: 707/101; 707/100, 707/103R

FIELD-OF-SEARCH: 707/1, 707/101, 707/100, 707/201, 707/3, 707/4, 707/7, 707/103

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5692181	November 1997	Anand et al.	707/102
☐	5706495	January 1998	Chadha et al.	707/2
☐	5708828	January 1998	Coleman	707/523
☐	5721903	February 1998	Anand et al.	707/5
☐	5781911	July 1998	Young et al.	707/201
☐	5794228	August 1998	French et al.	707/2
☐	5794229	August 1998	French et al.	707/2
☐	5794246	August 1998	Sankaran et al.	707/101
☐	5826258	October 1998	Gupta et al.	707/4
☐	5832496	November 1998	Anand et al.	707/100
☐	5842213	November 1998	Odom et al.	707/100
☐	5870746	February 1999	Kuntson et al.	707/101
☐	5870747	February 1999	Sunderesan	707/101
☐	5873102	February 1999	Bridge, Jr. et al.	707/204

OTHER PUBLICATIONS

White, Colin, "Data Warehousing:Cleaning and transforming data" InforDB vol. 10 No. 6. , pp. 11-12, Apr. 1997.*
White Colin, "Managing Data Transformations" Byte vol. 22, No. 12, p. 53-54, Dec. 1997.*
Squire Cass., "Data Extraction and Transformation for the Data Warehouse" 1995 ACM Signoid international conference on management of data, p. 446-447, May 1995

ART-UNIT: 2172

PRIMARY-EXAMINER: Shah; Sanjiv

ABSTRACT:

A transformation description language (TDL) for specifying how data is to be manipulated in a data warehousing application. The TDL is comprised of a source for storing raw data, one or more transformation objects for processing the raw data according to predefined instructions, and a target for storing the processed data. A mapping is used for directing the data flow between the I/O ports corresponding to the source, the plurality of transformation objects, and the target. The mapping specifies the connectivity between the source, transformation, and target objects as well as the order of these connections. There are a number of different transformations which can be performed to manipulate the data. Some such transformations include: an aggregator transformation, an expression transformation, a filter transformation, a lookup transformation, a query transformation, a sequence transformation, a stored procedure transformation, and an update strategy transformation.

13 Claims, 15 Drawing figures

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☐ | Generate Collection | Print

L7: Entry 8 of 10   File: USPT   Aug 28, 2001

US-PAT-NO: 6282544
DOCUMENT-IDENTIFIER: US 6282544 B1

TITLE: Method and apparatus for populating multiple data marts in a single
aggregation process

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tse; Eva Man-Yan	Sunnyvale	TX		
Lore; Michael Dean	Katy	TX		
Attaway; James Daniel	Katy	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Computer Associates Think, Inc.	Islandia	NY			02

APPL-NO: 09/ 317773   [PALM]
DATE FILED: May 24, 1999

INT-CL: [07] G06 F 17/00

US-CL-ISSUED: 707/101; 707/3, 707/6, 707/8, 707/2
US-CL-CURRENT: 707/101; 707/2, 707/3, 707/6, 707/8

FIELD-OF-SEARCH: 707/2, 707/100, 707/101, 707/201, 707/1, 707/3, 707/6, 707/8,
707/10, 705/10

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | Search ALL |

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐ 5778350	July 1998	Adams et al.	707/1
☐ 5794246	August 1998	Sankaran et al.	707/101
☐ 5799300	August 1998	Agrawal et al.	707/1
☐ 5832475	November 1998	Agrawal et al.	707/2
☐ 5890154	March 1999	Hsiao et al.	707/8
☐ 5905985	May 1999	Malloy et al.	707/100
☐ 5960435	September 1999	Rathmann et al.	707/101
☐ 5978788	November 1999	Castelli et al.	707/2
☐ 5983224	November 1999	Singh et al.	707/6
☐ 6014670	January 2000	Zamanian et al.	707/101
☐ 6032158	February 2000	Mukhopadhyay et al.	707/201
☐ 6061658	May 2000	Chou et al.	705/10
☐ 6078918	June 2000	Allen et al.	707/6
☐ 6078924	June 2000	Ainsbury et al.	707/101
☐ 6189004	February 2001	Rassen et al.	707/3

OTHER PUBLICATIONS

5. www.pathfinder.com/money/latest/press/PW/1998Sep01/248.html.
1. The Data Warehouse Toolkit--Author, Ralph Kimball--Publisher, John Wiley & Sons 1996--Chapter 13: Aggregates.
2. Planning and Designing the Data Warehouse, Ramon Barquin and Herb Edelstein, Editors--Publisher, Prentice Hall PTR 1997--Chapter 9 Database Design for Data Warehouses: The Basic Requirements--pp. 194-197 Different Star Scheme Types.
3. Building, Using, and Managing the Data Warehouse, Ramon Barquin and Herb Edelstein, Editors--Publisher, Prentice Hall PTR 1997--p. 10, Fig. 1-2: where Aggregation Fits.
4. www.prismsolutions.com/news_info/corp.sub.13 capabilities6.html--Corporate Capabilities.

ART-UNIT: 211

PRIMARY-EXAMINER: Black; Thomas

ASSISTANT-EXAMINER: Pardo; Thuy N.

ABSTRACT:

A method of populating multiple data marts in a single operation from a set of transactional data held in a database in a single aggregation process, in which aggregate values are calculated only once, a determination is made as to which output data marts required the aggregate value, and the aggregate values are output to the appropriate data marts. Dimension data associated with the output aggregate records is also output to the appropriate data marts.

12 Claims, 5 Drawing figures

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L7: Entry 10 of 10   File: USPT   Jan 11, 2000

US-PAT-NO: 6014670
DOCUMENT-IDENTIFIER: US 6014670 A

TITLE: Apparatus and method for performing data transformations in data warehousing

DATE-ISSUED: January 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zamanian; M S Kiumarse	San Francisco	CA		
Nesamoney; Diaz	San Francisco	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Informatica Corporation	Menlo Park	CA			02

APPL-NO: 08/ 966449   [PALM]
DATE FILED: November 7, 1997

INT-CL: [06] G06 F 17/30

US-CL-ISSUED: 707/101; 707/100
US-CL-CURRENT: 707/101; 707/100

FIELD-OF-SEARCH: 707/101, 707/201, 707/3, 707/4, 707/7, 707/100

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5692181	November 1997	Anand et al.	707/102
☐	5706495	January 1998	Chadha et al.	707/2
☐	5708828	January 1998	Coleman	707/523
☐	5721903	February 1998	Anand et al.	707/5
☐	5781911	July 1998	Young et al.	707/201
☐	5794228	August 1998	French et al.	707/2
☐	5794229	August 1998	French et al.	707/2
☐	5794246	August 1998	Sankaran et al.	707/101
☐	5826258	October 1998	Gupta et al.	707/4
☐	5832496	November 1998	Anand et al.	707/102
☐	5842213	November 1998	Odom et al.	707/100
☐	5870746	February 1999	Knutson et al.	707/101
☐	5870747	February 1999	Sundaresan	707/101
☐	5873102	February 1999	Bridge, Jr. et al.	707/204

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OTHER PUBLICATIONS

White, Colin. "Data Warehousing: Cleaning and Transforming Data." InforDB vol. 10
No. 6. Apr. 1997. Database Associates INT, USA. pp. 11-12. XP-002091743.
White, Colin. "Managing Data Transformations." Byte (International Edition) vol. 22,
No. 12. Dec. 1997. McGraw-Hill, USA. pp. 53-54. XP002091744.
Squire, Cass. "Data Extraction and Transformation for the Data Warehouse." 1995 ACM
Sigmod International Conference on Management of Data, San Jose, CA, USA, May 22-25,
1995. pp. 446-447. XP0092091745.

ART-UNIT: 277

PRIMARY-EXAMINER: Kulik; Paul V.

ASSISTANT-EXAMINER: Shah; Sanjiv

ABSTRACT:

A transformation description language (TDL) for specifying how data is to be
manipulated in a data warehousing application. The TDL is comprised of a source for
storing raw data, one or more transformation objects for processing the raw data
according to predefined instructions, and a target for storing the processed data. A
mapping is used for directing the data flow between the I/O ports corresponding to
the source, the plurality of transformation objects, and the target. The mapping
specifies the connectivity between the source, transformation, and target objects as
well as the order of these connections. There are a number of different
transformations which can be performed to manipulate the data. Some such
transformations include: an aggregator transformation, an expression transformation,
a filter transformation, a lookup transformation, a query transformation, a sequence
transformation, a stored procedure transformation, and an update strategy
transformation.

51 Claims, 13 Drawing figures

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End of Result Set

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L37: Entry 2 of 2   File: USPT   Feb 26, 2002

US-PAT-NO: 6351453
DOCUMENT-IDENTIFIER: US 6351453 B1

TITLE: Internet service provider (ISP) finder

DATE-ISSUED: February 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
Dion; Karen	Dudley	MA		
LaPearl; Richard	Princeton	MA		
Noonan; Sheila	Falmouth	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Bell Atlantic Network Services, Inc.	Arlington	VA			02

APPL-NO: 09/ 188679   [PALM]
DATE FILED: November 10, 1998

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATION This application is a continuation-in-part of
U.S. patent application Ser. No. 09/048,102 filed on Mar. 26, 1998 entitled NETWORK
PLANNING TRAFFIC MEASUREMENT PROGRAM, the disclosure of which is entirely
incorporated herein by reference.

INT-CL: [07] H04 M 15/00, H04 J 1/16, H04 L 5/12

US-CL-ISSUED: 370/234; 370/232, 370/233, 379/112.01, 379/133
US-CL-CURRENT: 370/234; 370/232, 370/233, 379/112.01, 379/133

FIELD-OF-SEARCH: 379/112, 379/113, 379/133, 379/134, 379/135, 379/34, 379/265,
379/266, 379/309, 379/111, 370/229, 370/230, 370/231, 370/232, 370/233, 370/237,
370/235, 370/236, 370/234

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected   Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4456788	June 1984	Kline et al.	
☐	4760594	July 1988	Reed	
☐	5285494	February 1994	Sprecher et al.	
☐	5333183	July 1994	Herbert	
☐	5359649	October 1994	Rosu et al.	
☐	5425087	June 1995	Gerber et al.	
☐	5434845	July 1995	Miller	

☐	5438570	August 1995	Karras et al.
☐	5457729	October 1995	Hamann et al.
☐	5475732	December 1995	Pester, III
☐	5483590	January 1996	Chiu et al.
☐	5563930	October 1996	Pester, III
☐	5579371	November 1996	Aridas et al.
☐	5592530	January 1997	Brockman et al.
☐	5642396	June 1997	Cowgill
☐	5692181	November 1997	Anand et al.
☐	5712908	January 1998	Brinkman et al.
☐	5715294	February 1998	Pester, III
☐	5724584	March 1998	Peters et al.
☐	5737399	April 1998	Witzman et al.
☐	5757895	May 1998	Aridas et al.
☐	5768352	June 1998	Elliott et al.
☐	5774530	June 1998	Montgomery et al.
☐	5793839	August 1998	Farris et al.
☐	5802145	September 1998	Farris et al.
☐	5809120	September 1998	Montgomery et al.
☐	5825769	October 1998	O'Reilly
☐	5828729	October 1998	Clermont et al.
☐	5835583	November 1998	Hetz et al.
☐	5838682	November 1998	Dekelbaum et al.	370/401
☐	5838769	November 1998	McNeil et al.
☐	5844981	December 1998	Pitchford et al.
☐	5850426	December 1998	Watkins et al.
☐	5852819	December 1998	Beller
☐	5854834	December 1998	Gottlieb et al.
☐	5854835	December 1998	Montgomery et al.
☐	5864608	January 1999	Brownmiller et al.
☐	5867558	February 1999	Swanson
☐	5867565	February 1999	Morikawa
☐	5875238	February 1999	Glitho et al.
☐	5881140	March 1999	Gerault et al.
☐	5896445	April 1999	Kay et al.	379/135
☐	5901208	May 1999	Jabbarnezhad
☐	5905785	May 1999	Dunn et al.	379/113
☐	5905985	May 1999	Malloy et al.
☐	5907603	May 1999	Gallagher et al.
☐	5917898	June 1999	Bassa et al.
☐	5933490	August 1999	White et al.	379/221
☐	5937042	August 1999	Sofman
☐	5940471	August 1999	Homayoun
☐	5949862	September 1999	Fukuzawa et al.
☐	5999604	December 1999	Walter

☐	6011838	January 2000	Cox	379/113
☐	6052447	April 2000	Golden et al.	379/114
☐	6052448	April 2000	Janning	
☐	6067354	May 2000	Bauer et al.	
☐	6075848	June 2000	Lunn et al.	
☐	6078647	June 2000	D'Eletto	379/34
☐	6112238	August 2000	Boyd et al.	
☐	6141412	October 2000	Smith et al.	

OTHER PUBLICATIONS

"Gentia Software, Section 3: Query and Reporting Tools", by META Group, Inc., Data Warehousing Tools Bulletin (Aug. 1997); pp., 3615-3620.

ART-UNIT: 2743

PRIMARY-EXAMINER: Kuntz; Curtis

ASSISTANT-EXAMINER: Barnie; Rexford N

ABSTRACT:

Specialized telecom network users who burden the network, such as Internet Service Providers (ISPs), are identified by analysis of network traffic data to identify addresses (e.g. telephone numbers) for destinations receiving unique patterns of incoming traffic. For an ISP, in particular, the analysis involves identifying telephone, numbers of destinations receiving a high volume of calls and having connections exhibiting a long average hold time. To further enhance the ISP finder analysis, the call data may be examined to confirm that there is no outgoing call traffic from any station associated with the candidate ISP numbers. When numbers are identified by the call data analysis, a technician can call each number and listen for a modem tone, as a confirmation that each candidate number actually is of a data service, such as an ISP. Similar methodologies can identify destination numbers for other unique service providers, such as credit card verification services. The preferred embodiments utilize automated systems to compile and analyze call records from standard messages of a telephone network, such as interoffice signaling messages or automated accounting messages.

40 Claims, 8 Drawing figures

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L37: Entry 1 of 2   File: USPT   May 7, 2002

US-PAT-NO: 6385301
DOCUMENT-IDENTIFIER: US 6385301 B1

TITLE: Data preparation for traffic track usage measurement

DATE-ISSUED: May 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nolting; Thomas A.	Holliston	MA		
LaPearl; Richard	Princeton	MA		
Dion; Karen	Dudley	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Bell Atlantic Services Network, Inc.	Arlington	VA			02

APPL-NO: 09/ 188713   [PALM]
DATE FILED: November 10, 1998

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATION This application is a continuation-in-part of
U.S. patent application Ser. No. 09/048,102 filed on Mar. 26, 1998 entitled NETWORK
PLANNING TRAFFIC MEASUREMENT PROGRAM, the disclosure of which is entirely
incorporated herein by reference.

INT-CL: [07] H04 M 1/24, H04 M 15/00

US-CL-ISSUED: 379/32.01; 379/32.02, 379/112.01, 379/112.07, 379/133, 379/134
US-CL-CURRENT: 379/32.01; 379/112.01, 379/112.07, 379/133, 379/134, 379/32.02

FIELD-OF-SEARCH: 379/113, 379/133, 379/134, 379/34, 379/32.01, 379/32.02, 379/32.03,
379/32.05, 379/112.01, 379/112.05, 379/112.06, 379/112.07, 379/114.01

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | Search ALL |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4456788	June 1984	Kline et al.	
☐	4760594	July 1988	Reed	
☐	4788718	November 1988	McNabb et al.	379/113
☐	5008929	April 1991	Olsen et al.	379/112
☐	5285494	February 1994	Sprecher et al.	379/59
☐	5333183	July 1994	Herbert	
☐	5359649	October 1994	Rosu et al.	
☐	5425087	June 1995	Gerber et al.	
☐	5457729	October 1995	Hamann et al.	

☐	5475732	December ● 1995	Pester, III	
☐	5563930	October 1996	Pester, III	
☐	5579371	November 1996	Aridas et al.	
☐	5592530	January 1997	Brockman et al.	
☐	5712908	January 1998	Brinkman et al.	
☐	5715294	February 1998	Pester, III	
☐	5737399	April 1998	Witzman et al.	
☐	5757895	May 1998	Aridas et al.	
☐	5768352	June 1998	Elliott et al.	379/112
☐	5774530	June 1998	Montgomery et al.	379/112
☐	5774532	June 1998	Gottlieb et al.	379/112
☐	5793839	August 1998	Farris et al.	
☐	5802145	September 1998	Farris et al.	
☐	5809120	September 1998	Montgomery et al.	
☐	5809121	September 1998	Elliott et al.	379/127
☐	5825769	October 1998	O'Reilly et al.	
☐	5828729	October 1998	Clermont et al.	
☐	5835583	November 1998	Hetz et al.	379/220
☐	5838682	November 1998	Dekelbaum et al.	
☐	5838796	November 1998	McNeil et al.	
☐	5844981	December 1998	Pitchford et al.	
☐	5850426	December 1998	Watkins et al.	
☐	5854834	December 1998	Gottlieb et al.	379/113
☐	5854835	December 1998	Montgomery et al.	
☐	5864608	January 1999	Brownmiller et al.	379/113
☐	5867565	February 1999	Morikawa	
☐	5878113	March 1999	Bhusri	379/112
☐	5881140	March 1999	Gerault et al.	
☐	5901208	May 1999	Jabbarnezhad	
☐	5905785	May 1999	Dunn et al.	
☐	5905985	May 1999	Malloy et al.	
☐	5907603	May 1999	Gallagher et al.	379/133
☐	5917898	June 1999	Bassa et al.	379/133
☐	5930344	July 1999	Relyea et al.	379/126
☐	5933490	August 1999	White et al.	
☐	5937042	August 1999	Sofman	379/133
☐	5940471	August 1999	Homayoun	
☐	5949862	September 1999	Fukuzawa et al.	379/113
☐	5999604	December 1999	Walter	379/133
☐	6011838	January 2000	Cox	
☐	6067354	May 2000	Bauer et al.	379/113
☐	6078647	June 2000	D'Eletto	

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"Investor Relations FAQs" published by Inet Technologies, Inc., Sep. 7, 2000.
Promotional materials entitled "Network Operations & Maintenance", "IT: seven

Revenue Assurance Applications", "Diagnostics", and "IP/SS7 Interoperability" by Inet Technolgies, Inc.
Promotional Brochure entitled "GeoProbe Mobile", published by Inet Technologies, Inc.
Promotional materials published by Inet Technologies, Inc., including GeoProbe Service Provider's Competitive Advantage, GeoCare, and 2 press releases.
Inet Technologies Inc. (INTI) Quarterly Report (SEC form 10-Q), dated Aug. 4, 2000.
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Article entitled "By probing your SS7 links, you can gather all sorts of information", published in Wireless Review, May 1, 1998.
Press Release entitled "Inet Technologies Reports Record Revenues for Eleventh Consecutive Quarter"dated Jan. 25, 2001.
Hewlett Packard 1991 "Test & Measurement Catalog", entitled "Data Communications Test Equipment", p. 567.
Hewlett Packard Brochure entitled "Unlock the secrets of Signaling System No. 7--fast", HP 37900B and 37900C Signaling Test Sets.
Hewlett Packard Brochure entitled "GSM Signaling Test System", HP 37900 Product Note-1.
"Can you afford to be without SS7 network surveillance?" by Rex R. Hester, Telephony, Dec. 3, 1990.
"Telecommunications", International Edition, vol. 23, No. 8, Aug. 1989.
Article entitled "Test and Measurement Techniques for GSM", from Telecommunications, Dec. 1989 issue.
"Gentia Software, Section 3: Query and Reporting Tools", by META Group, Inc., Data Warehousing Tools Bulletin (Aug. 1997); pp. 3615-3620.

ART-UNIT: 2643

PRIMARY-EXAMINER: Nguyen; Duc

ASSISTANT-EXAMINER: Tran; Quoc D.

ABSTRACT:

A monitoring system captures and processes messages from SS7 links, to compile call detail records (CDRs) for all interoffice call attempts. The CDRs are uploaded into a relational database. Automatic Message Accounting (AMA) records also are accumulated and uploaded to another relational database. A data preparation operation enhances the records for further processing. This data preparation operation involves translating information in the records into more useful forms, using external reference data regarding the monitored network. For example, the data preparation translates SS7 point codes or NPA-NXX codes in the records to textual names of originating and terminating offices. The data preparation also spreads the usage information from the records to properly allocate usage time to predefined intervals. Another function of the data preparation stage is to form one or more predefined tables from the processed records, for example a table of modified records and one or more specialized summary tables. The data, so prepared, is uploaded to an on-line analytical processing application.

22 Claims, 7 Drawing figures

WEST

☐ | Generate Collection | | Print |

        File: USPT   Nov 21, 2000

US-PAT-NO: 6151601
DOCUMENT-IDENTIFIER: US 6151601 A

TITLE: Computer architecture and method for collecting, analyzing and/or transforming internet and/or electronic commerce data for storage into a data storage area

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papierniak; Karen A.	Fenton	MN		
Thaisz; James E.	Lincroft	NJ		
Diwekar; Anjali M.	Matawan	NJ		
Chiang; Luo-Jen	Freehold	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 08/ 968728   [PALM]
DATE FILED: November 12, 1997

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/10; 707/1
US-CL-CURRENT: 707/10; 707/1

FIELD-OF-SEARCH: 707/1, 707/2, 707/8, 707/9, 707/10, 707/102, 707/104

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

| Search Selected | | Search ALL |

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5668988	September 1997	Chen et al.	707/101
☐	5752246	May 1998	Rogers et al.	707/10
☐	5802511	September 1998	Kouchi et al.	707/2
☐	5825751	October 1998	Papierniak et al.	370/248
☐	5867799	February 1999	Lang et al.	707/1

ART-UNIT: 271

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Shah; Sanjiv

ABSTRACT:

                  2/12/03 10:56 AM

A computer system collects, analyzes and/or transforms Internet and/or electronic commerce data of service providers. The Internet and/or electronic commerce data includes one or more of business operational data and network operational data. The mapping system includes a database storing the Internet and/or electronic commerce data for interrogation by the CSP, and at least one computer station including data transformation and database load utilities. The computer station performs one or more of the functions: of transforming and organizing the business operational data; analyzing, and organizing the web server operational data pertaining to web page requests, accesses, and browsing into the format suitable to be loaded into said database; analyzing and organizing the Internet operational data pertaining to network sessions and accesses; correlating the network sessions, and authorization and application access data to customers; creating directories of applications; translating raw system data pertaining to Internet and/or electronic commerce applications into a business context; and correlating the business operational data and the network operational data into one or more datasets.

31 Claims, 23 Drawing figures

WEST

☐ [Generate Collection] [Print]

L36: Entry 75 of 88   File: USPT   Nov 21, 2000

US-PAT-NO: 6151584
DOCUMENT-IDENTIFIER: US 6151584 A

TITLE: Computer architecture and method for validating and collecting and metadata and data about the internet and electronic commerce environments (data discoverer)

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Papierniak; Karen A.	St. Paul	MN		
Thaisz; James E.	Lincroft	NJ		
Chiang; Luo-Jen	Freehold	NJ		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
NCR Corporation	Dayton	OH			02

APPL-NO: 08/ 975433   [PALM]
DATE FILED: November 20, 1997

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/10
US-CL-CURRENT: 705/10

FIELD-OF-SEARCH: 701/1, 701/10, 701/6, 701/7, 701/104, 395/610

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

[Search Selected] [Search ALL]

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5583763	December 1996	Atcheson et al.	707/3
☐	5696965	December 1997	Dedrick	395/610
☐	5715450	February 1998	Ambrose et al.	395/614
☐	5890152	March 1999	Rapaport et al.	707/6

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East Texas ISP Survey; http://www.tesramp.net/.about.dbell/isp.htm, Sep. 1996.
Companies begin tracking web-use patterns; CommunicationsWeek, Issue 633, p71,2p, 1c; Maddox, Kate, Oct. 1996.
Tracking Down Internet Spending; Sales & Marketing Management, vol. 148, Issue 4, p20, 1/3p, 2 charts; Lucas, Allison, Apr. 1996.
Toeing The Line On The 'Net; Communications News, vol. 34, Issue3, p34, 1/2p; Salt River Prject; WEBTRACK, Mar. 1997.
Kenan Systems: Corporate initiative to capture leadership in converging communication markets; M2 Presswire; Apr. 1996.
Data Warehousing: Pilot software announces strategic alliance with IBM; Edge: Work-Group Computing Report vol.: 6 Issue: 283, Oct. 1995.
Pilot Software: Pilot Software Launches major new data mining initiative: M2

Presswire, Nov. 1995.
An Introduction To data Warehousing: Vivek R. Gupta, System Services corporation,
Sep. 1996.

ART-UNIT: 274

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Retta; Yehdega

ABSTRACT:

A method of collecting subscriber specified information supports retrieval of
information to analyze Internet and/or electronic commerce data over or from the
World Wide Web for service providers using a computer. The method includes the steps
of providing a customer with a questionnaire and/or forms to collect customer
specific data, collecting the customer specific data, and parsing the customer
specific data into environmental data and business data. The method also includes
the steps of determining information source requirements (representing predetermined
requirements) and optional decision support requirements (representing customer
specified requirements), responsive to one or both of the environmental data and the
business data, and determining core business rules and core data sources responsive
to the information source requirements. The method also includes the steps of
determining optional incremental business rules and optional incremental data
sources responsive to the decision support requirements, and determining the
information requiring retrieval to analyze the Internet and/or electronic commerce
data over or from the World Wide Web utilizing the core business rules, the core
data sources, the optional incremental business rules, and the optional incremental
data sources.

45 Claims, 21 Drawing figures

Most Frequently Occurring Classifications of Patents Returned
From A Search of 09483386 on December 18, 2002

Original Classifications
  6   235/383
  5   379/114.14
  4   235/375
  4   705/14
  2   186/61
  2   235/380
  2   235/385
  2   235/449
  2   355/40
  2   379/115.01
  2   705/21
  2   705/44
  2   705/71
  2   709/224
  2   709/237

Cross-Reference Classifications
  9   235/383
  8   235/375
  8   235/380
  6   235/487
  5   235/432
  5   379/267
  4   235/379
  4   235/382
  4   235/385
  4   235/492
  4   379/114.15
  4   379/114.17
  4   379/114.19
  4   379/91.01
  3   235/376
  3   235/475
  3   705/14
  3   705/53
  2   186/61
  2   235/377
  2   235/381
  2   235/382.5
  2   235/439
  2   235/462.45
  2   235/486
  2   235/493

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2   271/902
2   341/23
2   379/114.01
2   379/114.14
2   379/260
2   379/88.24
2   379/93.14
2   400/73
2   705/16
2   705/5
2   705/73
2   705/8
2   902/22
2   902/26
2   902/40
2   902/5
```

Combined Classifications
```
15   235/383
12   235/375
10   235/380
 7   235/487
 7   379/114.14
 7   705/14
 6   235/385
 5   235/379
 5   235/432
 5   379/267
 4   186/61
 4   235/382
 4   235/492
 4   379/114.15
 4   379/114.17
 4   379/114.19
 4   379/91.01
 3   235/376
 3   235/475
 3   705/16
 3   705/44
 3   705/5
 3   705/53
 3   705/73
 2   141/94
 2   177/25.15
 2   235/377
 2   235/381
 2   235/382.5
 2   235/439
```

2   235/449
2   235/462.45
2   235/486
2   235/493
2   271/902
2   341/23
2   355/40
2   379/114.01
2   379/115.01
2   379/157
2   379/201.02
2   379/242
2   379/260
2   379/88.24
2   379/91.02
2   379/93.14
2   400/73
2   705/21
2   705/23
2   705/41
2   705/410
2   705/57
2   705/71
2   705/8
2   705/80
2   707/104.1
2   709/224
2   709/237
2   714/7
2   902/22
2   902/26
2   902/40
2   902/5

09483386_CLSTITLES
Titles of Most Frequently Occurring Classifications of Patents Returne
d
From A Search of 09483386 on December 18, 2002

15 235/383   (6 OR, 9 XR)
        Class   235 : REGISTERS
        235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS
        235/383   .Mechanized store

12 235/375   (4 OR, 8 XR)
        Class   235 : REGISTERS
        235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS

10 235/380   (2 OR, 8 XR)
        Class   235 : REGISTERS
        235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS
        235/380   .Credit or identification card systems

 7 235/487   (1 OR, 6 XR)
        Class   235 : REGISTERS
        235/487   RECORDS

 7 379/114.14   (5 OR, 2 XR)
        Class   379 : TELEPHONIC COMMUNICATIONS
        379/111   WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
                               REGISTER)
        379/114.01   .Call charge metering or monitoring
        379/114.14   ..Fraud detection or control

 7 705/14   (4 OR, 3 XR)
        Class   705 : DATA PROCESSING: FINANCIAL, BUSINESS
                           PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
        705/1   AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
                               PRACTICE OR MANAGEMENT ARRANGEMENT
        705/14   .Distribution or redemption of coupon, or
                               incentive or promotion program

 6 235/385   (2 OR, 4 XR)
        Class   235 : REGISTERS
        235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS
        235/385   .Inventory

 5 235/379   (1 OR, 4 XR)
        Class   235 : REGISTERS
        235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS
        235/379   .Banking systems

```
5  235/432        (0 OR, 5 XR)
        Class  235 :  REGISTERS
        235/419           RECORD CONTROLLED CALCULATORS
        235/432            .With printing


5  379/267        (0 OR, 5 XR)
        Class  379 :  TELEPHONIC COMMUNICATIONS
        379/242           CENTRALIZED SWITCHING SYSTEM
        379/258            .Switching controlled in response to called
                              station addressing signal
        379/260            ..With operator position or completion of call
                              (e.g., dial "O", semiautomatic)
        379/267            ...Operator's console


4  186/61         (2 OR, 2 XR)
        Class  186 :  MERCHANDISING
        186/35            CUSTOMER SERVICE
        186/52             .Store service
        186/59             ..Checkout counter
        186/61             ...With means enabling price reading


4  235/382        (0 OR, 4 XR)
        Class  235 :  REGISTERS
        235/375           SYSTEMS CONTROLLED BY DATA BEARING RECORDS
        235/380            .Credit or identification card systems
        235/382            ..Permitting access


4  235/492        (0 OR, 4 XR)
        Class  235 :  REGISTERS
        235/487           RECORDS
        235/492            .Conductive


4  379/114.15     (0 OR, 4 XR)
        Class  379 :  TELEPHONIC COMMUNICATIONS
        379/111           WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
                              REGISTER)
        379/114.01         .Call charge metering or monitoring
        379/114.15         ..Calling card


4  379/114.17     (0 OR, 4 XR)
        Class  379 :  TELEPHONIC COMMUNICATIONS
        379/111           WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
                              REGISTER)
        379/114.01         .Call charge metering or monitoring
        379/114.15         ..Calling card
        379/114.17         ...Monitoring account or card usage balance
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 4  379/114.19    (0 OR, 4 XR)
         Class   379 :  TELEPHONIC COMMUNICATIONS
         379/111            WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
                               REGISTER)
         379/114.01      .Call charge metering or monitoring
         379/114.15      ..Calling card
         379/114.19      ...Credit card


 4  379/91.01     (0 OR, 4 XR)
         Class   379 :  TELEPHONIC COMMUNICATIONS
         379/90.01       TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE
                            ELECTRICAL SYSTEM OR SIGNALLING (E.G., COM
POSITE)
         379/91.01       .Credit authorization


 3  235/376       (0 OR, 3 XR)
         Class   235 :  REGISTERS
         235/375         SYSTEMS CONTROLLED BY DATA BEARING RECORDS
         235/376         .Operations analysis


 3  235/475       (0 OR, 3 XR)
         Class   235 :  REGISTERS
         235/435         CODED RECORD SENSORS
         235/475         .Feed mechanisms


 3  705/16        (1 OR, 2 XR)
         Class   705 :  DATA PROCESSING: FINANCIAL, BUSINESS
                           PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
         705/1           AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
                            PRACTICE OR MANAGEMENT ARRANGEMENT
         705/16          .Including point of sale terminal or electroni
c
                            cash register


 3  705/44        (2 OR, 1 XR)
         Class   705 :  DATA PROCESSING: FINANCIAL, BUSINESS
                           PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
         705/1           AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
                            PRACTICE OR MANAGEMENT ARRANGEMENT
         705/35          .Finance (e.g., banking, investment or credit)

         705/39          ..Including funds transfer or credit
                            transaction
         705/44          ...Requiring authorization or authentication


 3  705/5         (1 OR, 2 XR)
```

Class   705 :   DATA PROCESSING: FINANCIAL, BUSINESS
                PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/1   AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
                PRACTICE OR MANAGEMENT ARRANGEMENT
705/5   .Reservation, check-in, or booking display for
                reserved space

3   705/53   (0 OR, 3 XR)
Class   705 :   DATA PROCESSING: FINANCIAL, BUSINESS
                PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/50   BUSINESS PROCESSING USING CRYPTOGRAPHY
705/51   .Usage protection of distributed data files
705/52   ..Usage or charge determination
705/53   ...Including third party for collecting or
                distributing payment (e.g., clearinghouse)

3   705/73   (1 OR, 2 XR)
Class   705 :   DATA PROCESSING: FINANCIAL, BUSINESS
                PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/50   BUSINESS PROCESSING USING CRYPTOGRAPHY
705/64   .Secure transaction (e.g., EFT/POS)
705/73   ..Terminal detail (e.g., initializing)

2   141/94   (1 OR, 1 XR)
Class   141 :   FLUENT MATERIAL HANDLING, WITH RECEIVER OR
                RECEIVER COACTING MEANS
141/94   WITH SIGNAL, INDICATOR, RECORDER, INSPECTION
                MEANS OR EXHIBITOR

2   177/25.15   (1 OR, 1 XR)
Class   177 :   WEIGHING SCALES
177/25.11   COMPUTER
177/25.12   .Electrical
177/25.13   ..Digital
177/25.14   ...Multiplying or dividing scales
177/25.15   ....Price

2   235/377   (0 OR, 2 XR)
Class   235 :   REGISTERS
235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS
235/377   .Time analysis

2   235/381   (0 OR, 2 XR)
Class   235 :   REGISTERS
235/375   SYSTEMS CONTROLLED BY DATA BEARING RECORDS

```
        235/380        .Credit or identification card systems
        235/381        ..With vending

 2  235/382.5     (0 OR, 2 XR)
        Class   235 :  REGISTERS
        235/375        SYSTEMS CONTROLLED BY DATA BEARING RECORDS
        235/380        .Credit or identification card systems
        235/382        ..Permitting access
        235/382.5      ...Changeable authorization

 2  235/439       (0 OR, 2 XR)
        Class   235 :  REGISTERS
        235/435        CODED RECORD SENSORS
        235/439        .Particular sensor structure

 2  235/449       (2 OR, 0 XR)
        Class   235 :  REGISTERS
        235/435        CODED RECORD SENSORS
        235/439        .Particular sensor structure
        235/449        ..Magnetic

 2  235/462.45    (0 OR, 2 XR)
        Class   235 :  REGISTERS
        235/435        CODED RECORD SENSORS
        235/439        .Particular sensor structure
        235/454        ..Optical
        235/462.01     ...Bar code
        235/462.43     ....Specified housing or mounting detail
        235/462.45     .....Hand-held (e.g., portable)

 2  235/486       (0 OR, 2 XR)
        Class   235 :  REGISTERS
        235/435        CODED RECORD SENSORS
        235/486        .Holding devices

 2  235/493       (0 OR, 2 XR)
        Class   235 :  REGISTERS
        235/487        RECORDS
        235/493        .Magnetic

 2  271/902       (0 OR, 2 XR)
        Class   271 :  SHEET FEEDING OR DELIVERING
        271/902        REVERSE DIRECTION OF SHEET MOVEMENT

 2  341/23        (0 OR, 2 XR)
        Class   341 :  CODED DATA GENERATION OR CONVERSION
        341/20         BODILY ACTUATED CODE GENERATOR
        341/22         .Including keyboard or keypad
```

341/23   ..Variable key legends

2   355/40   (2 OR, 0 XR)
        Class   355 :   PHOTOCOPYING
        355/18   PROJECTION PRINTING AND COPYING CAMERAS
        355/40   .Identifying, composing, or selecting

2   379/114.01   (0 OR, 2 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/111   WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
                                REGISTER)
        379/114.01   .Call charge metering or monitoring

2   379/115.01   (2 OR, 0 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/111   WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC
                                REGISTER)
        379/114.01   .Call charge metering or monitoring
        379/115.01   ..Interexchange billing operation

2   379/157   (1 OR, 1 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/156   MULTI-LINE OR KEY SUBSTATION SYSTEM WITH
                                SELECTIVE SWITCHING AND CENTRAL SWITCHING
OFFICE CONNECTION

        379/157   .With special service

2   379/201.02   (1 OR, 1 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/201.01   SPECIAL SERVICES
        379/201.02   .Service profile (e.g., calling service)

2   379/242   (1 OR, 1 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/242   CENTRALIZED SWITCHING SYSTEM

2   379/260   (0 OR, 2 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/242   CENTRALIZED SWITCHING SYSTEM
        379/258   .Switching controlled in response to called
                                station addressing signal
        379/260   ..With operator position or completion of call
                                (e.g., dial "O", semiautomatic)

2   379/88.24   (0 OR, 2 XR)
        Class   379 :   TELEPHONIC COMMUNICATIONS
        379/67.1   AUDIO MESSAGE STORAGE, RETRIEVAL, OR SYNTHESIS

```
        379/88.22         .Message management
        379/88.23         ..Controlled by subscriber or caller
        379/88.24         ...By generated tone


   2  379/91.02      (1 OR, 1 XR)
        Class   379 :  TELEPHONIC COMMUNICATIONS
        379/90.01         TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE
                            ELECTRICAL SYSTEM OR SIGNALLING (E.G., CO
MPOSITE)
        379/91.01         .Credit authorization
        379/91.02         ..At switching station


   2  379/93.14      (0 OR, 2 XR)
        Class   379 :  TELEPHONIC COMMUNICATIONS
        379/90.01         TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE
                            ELECTRICAL SYSTEM OR SIGNALLING (E.G., CO
MPOSITE)
        379/93.01         .Having transmission of a digital message
                            signal over a telephone line
        379/93.14         ..Having switching station


   2  400/73         (0 OR, 2 XR)
        Class   400 :  TYPEWRITING MACHINES
        400/70            INCLUDING SELECTION OF TYPE-FACE BY
                            PROGRAMMED-CONTROL-SYSTEM OR BY REMOTE CON
TROL
        400/73            .Including particular reader structure and
                            operation


   2  705/21        (2 OR, 0 XR)
        Class   705 :  DATA PROCESSING: FINANCIAL, BUSINESS
                            PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
        705/1             AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
                            PRACTICE OR MANAGEMENT ARRANGEMENT
        705/16            .Including point of sale terminal or electroni
c
                            cash register
        705/21            ..Interconnection or interaction of plural
                            electronic cash registers (ECRs) or to host
computer (e.g.,
                            network detail, transfer of information fro
m host to ECR or
                            from ECR to ECR, etc.)


   2  705/23        (1 OR, 1 XR)
        Class   705 :  DATA PROCESSING: FINANCIAL, BUSINESS
```

PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/1   AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
      PRACTICE OR MANAGEMENT ARRANGEMENT
705/16   .Including point of sale terminal or electroni
c
      cash register
705/23   ..Input by product or record sensing (weighing
,
      scanner processing)

 2 705/41   (1 OR, 1 XR)
   Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
      PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/1   AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
      PRACTICE OR MANAGEMENT ARRANGEMENT
705/35   .Finance (e.g., banking, investment or credit)
705/39   ..Including funds transfer or credit
      transaction
705/41   ...Having programming of a portable memory
      device (e.g., IC card, "electronic purse")

 2 705/410   (1 OR, 1 XR)
   Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
      PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/400   FOR COST/PRICE
705/401   .Postage meter system
705/410   ..Specialized function performed

 2 705/57   (1 OR, 1 XR)
   Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
      PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/50   BUSINESS PROCESSING USING CRYPTOGRAPHY
705/51   .Usage protection of distributed data files
705/57   ..Copy protection or prevention

 2 705/71   (2 OR, 0 XR)
   Class 705 : DATA PROCESSING: FINANCIAL, BUSINESS
      PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
705/50   BUSINESS PROCESSING USING CRYPTOGRAPHY
705/64   .Secure transaction (e.g., EFT/POS)
705/71   ..Including key management

2   705/8   (0 OR, 2 XR)
         Class   705 :   DATA PROCESSING: FINANCIAL, BUSINESS
                            PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
         705/1   AUTOMATED ELECTRICAL FINANCIAL OR BUSINESS
                               PRACTICE OR MANAGEMENT ARRANGEMENT
         705/7   .Operations research
         705/8   ..Allocating resources or scheduling for an
                               administrative function

2   705/80   (1 OR, 1 XR)
         Class   705 :   DATA PROCESSING: FINANCIAL, BUSINESS
                            PRACTICE, MANAGEMENT, OR COST/PRICE DETERMIN
ATION
         705/80   ELECTRONIC NEGOTIATION

2   707/104.1   (1 OR, 1 XR)
         Class   707 :   DATA PROCESSING: DATABASE AND FILE
                            MANAGEMENT, DATA STRUCTURES, OR DOCUMENT   P
ROCESSING
         707/100   DATABASE SCHEMA OR DATA STRUCTURE
         707/104.1   .Application of database or data structure
                               (e.g., distributed, multimedia, image)

2   709/224   (2 OR, 0 XR)
         Class   709 :   ELECTRICAL COMPUTERS AND DIGITAL PROCESSING
                            SYSTEMS: MULTIPLE COMPUTER OR PROCESS   COO
RDINATING
         709/200   MULTICOMPUTER DATA TRANSFERRING
         709/223   .Computer network managing
         709/224   ..Computer network monitoring

2   709/237   (2 OR, 0 XR)
         Class   709 :   ELECTRICAL COMPUTERS AND DIGITAL PROCESSING
                            SYSTEMS: MULTIPLE COMPUTER OR PROCESS   COO
RDINATING
         709/200   MULTICOMPUTER DATA TRANSFERRING
         709/230   .Computer-to-computer protocol implementing
         709/237   ..Computer-to-computer handshaking

2   714/7   (1 OR, 1 XR)
         Class   714 :   ERROR DETECTION/CORRECTION AND FAULT
                            DETECTION/RECOVERY
         714/100   DATA PROCESSING SYSTEM ERROR OR FAULT HANDLING

         714/1   .Reliability and availability
         714/2   ..Fault recovery
         714/3   ...By masking or reconfiguration

```
714/5        ....Of memory or peripheral subsystem
714/6        .....Redundant stored data accessed (e.g.,
                     duplicated data, error correction coded da
ta, or other
                     parity-type data)
714/7        ......Reconfiguration (e.g., adding a
                     replacement storage component)


2  902/22       (0 OR, 2 XR)
     Class    902 :  ELECTRONIC FUNDS TRANSFER
     902/22          TERMINAL* REGISTERS TRANSACTION* (E.G., POINT
                         OF SALE TERMINAL*)


2  902/26       (0 OR, 2 XR)
     Class    902 :  ELECTRONIC FUNDS TRANSFER
     902/25          SPECIFIC IDENTIFIER* (E.G., BANK CARD)
     902/26          .Including semiconductor chip (e.g., smart
                         card)


2  902/40       (0 OR, 2 XR)
     Class    902 :  ELECTRONIC FUNDS TRANSFER
     902/37          SYSTEM*
     902/40          .Transaction* processing


2  902/5        (0 OR, 2 XR)
     Class    902 :  ELECTRONIC FUNDS TRANSFER
     902/1           WITH ELECTRONIC MEANS PROVIDING SECURITY
     902/4           .Means to read data stored on identifier*
     902/5           ..And to verify identity of user*
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4484269
4587411
4780599
5491471
5586175
5590181
5615251
5633919
5638430
5760877
5799156
5820793
5838251
5854833
5867566
5873099
6016343
4021619
4259720
4287567
4373133
4408203
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4418411
4481587
4521677
4630201
4766293
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4851650
4879649
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4982346
5021640
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5542081

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6290129
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6347723
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6363488
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6003031
4835711
5202825
5251179
5353218
5375680
5551021
5553127
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5822735
5906228
5969633
5995944
6028856
6069944
6073252
6134304
4324484
4362928
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4417136
4419573
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4484269 99
4587411 99
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6016343 99
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4259720 98
4287567 98
4373133 98
4408203 98
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4418411 98
4481587 98
4521677 98
4630201 98
4766293 98
4809326 98
4821186 98
4821267 98
4836309 98
4840344 98
4851650 98
4879649 98
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5177345 98
5260552 98
5305375 98
5375226 98
5412191 98
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5811771 98
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6298337 98
6347723 98
6363353 98
6363488 98
6389402 98
6427140 98
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5239165 83
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4835711 82
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5553127 82
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5906228 82
5969633 82
5995944 82
6028856 82
6069944 82
6073252 82
6134304 82
4324484 82
4362928 82
4403119 82
4417136 82
4419573 82
4433207 82
4475189 82
4488004 82
4509128 82
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4550246 82
4797913 82
4825045 82
4833308 82

ability 1
abstract 1
accordance 4
according 19
achieved 1
activity 4
advantages 2
affinity 2
aggregating 3
ago 1
all 4
also 9
amount 1
amr 1
an 11
analyses 3
analysis 12
analytical 2
analyzing 6
and 54
another 2
any 2
apparatus 2
appendices 1
application 8
applications 8
approaches 2
architecture 1
are 7
area 1
as 18
aspect 4
assimilated 1
at 10
attached 2
attorney 5
automation 1
average 1
background 1
based 7
bases 1
basis 1
be 16
behavior 2
being 2
bell 1
benefits 2
brackets 1

brief 1
briefcases 1
built 1
business 9
businesses 1
but 2
buy 1
by 5
can 29
centric 1
certain 1
chen 4
claims 1
classification 1
co 1
code 23
commonly 1
components 1
comprise 1
comprised 1
comprises 4
computer 18
computers 2
concurrently 1
conducting 1
configuration 2
conflicting 1
conjunction 2
contained 3
content 1
continues 1
continuing 1
conventional 1
could 1
cr 1
create 1
creating 15
cross 1
cumulative 1
curve 1
customer 27
customers 1
customize 1
customized 2
daily 1
data 82
database 14
databases 3

decision 5
definition 4
demographic 1
described 1
description 2
design 1
developers 1
development 1
differ 1
different 4
dimension 4
disadvantage 1
disclosure 2
display 3
displaying 1
displays 1
docket 5
documents 1
drawings 2
dynamic 3
dynamics 2
each 2
easily 1
elements 2
embodiment 11
embodiments 15
emphasize 1
enable 1
enables 1
enterprise 8
entirety 2
entitled 4
environment 8
especially 2
even 2
ever 1
every 1
example 1
examples 1
exemplary 2
exist 2
expandability 1
explosion 1
exponential 1
fact 5
few 2
field 1
fig 2

figs 5
filed 2
filtering 1
financial 1
first 11
fit 1
flowcharts 1
focus 1
following 2
for 69
foresee 1
formats 3
forms 2
forth 1
fractal 1
frequency 1
from 13
functioning 1
functions 1
further 6
gains 1
generally 1
generic 1
geographic 1
geometry 1
governments 1
graphically 3
greater 1
group 1
groups 2
have 3
having 2
help 1
hereby 1
herein 1
heretofore 1
hierarchy 2
histogram 1
homes 1
human 2
ia 1
identity 1
illustrate 5
illustrates 2
impact 1
implemented 1
implementing 1
importance 1

improved 1
in 47
include 5
included 1
includes 3
including 3
incorporated 2
increasing 1
indicating 1
individuals 1
information 15
inherent 1
input 4
integration 2
interoperable 1
into 1
invention 28
is 11
it 1
its 1
january 1
just 1
known 1
lb 1
least 10
li 4
life 1
like 5
limit 1
line 2
linear 1
list 1
lives 1
loci 2
lost 1
manage 1
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management 1
many 5
mapping 6
markedly 1
marts 3
may 2
measures 4
meta 4
method 2
migrate 1
migrating 1

migration 1
mining 1
mode 1
model 19
modeling 2
models 10
monetary 1
more 9
moving 1
must 2
nature 1
needed 1
needs 1
net 1
networks 1
neural 1
no 5
now 1
nr 1
number 4
numerous 1
of 50
offices 1
often 1
olap 6
on 6
one 21
operation 1
or 9
order 3
organization 2
organize 1
organized 2
other 4
others 1
our 5
ous 1
over 2
owned 1
pa 1
pareto 1
part 3
particular 8
patent 6
pending 1
perceived 1
percentile 1
performance 4

place 1
plurality 4
popular 2
portion 1
portions 1
present 23
presently 1
priority 1
problems 1
process 1
processing 4
product 3
profile 8
profiles 3
profiling 1
profitability 1
program 16
programs 1
proliferation 1
propensity 2
provide 9
provided 1
provides 10
providing 1
provisional 2
purposes 2
quantitative 1
quickly 1
range 1
ranking 1
rapid 1
rate 1
re 1
realized 1
receiving 5
recency 1
records 2
reference 3
references 1
regressions 1
related 1
relates 1
relationships 4
remaining 1
remains 1
report 6
reports 1
representations 2

representative 7
represents 1
require 1
requirements 1
resolve 1
results 2
retention 1
reusable 1
reverse 2
rules 1
said 1
same 1
satchels 1
schema 2
schools 1
scoring 1
second 8
segmentation 1
selectable 1
selection 3
sequence 1
serial 4
series 1
serve 1
server 3
simplified 1
solve 1
some 2
sorted 1
sources 9
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specifically 1
specification 2
star 2
static 1
statistical 1
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stored 2
structure 1
such 13
suitable 1
summarized 1
summary 1
support 5
system 11
systems 7
table 9
tables 1

technique 2
techniques 13
technology 3
terminate 1
than 1
that 4
the 121
their 2
them 1
these 3
they 1
third 1
this 5
though 1
throughout 1
time 2
to 52
tools 4
traditional 2
transferring 1
translation 2
trees 1
turned 2
typically 3
understanding 1
upon 3
us 2
usability 1
use 2
used 4
useful 2
user 2
users 1
using 2
usually 3
value 2
variety 4
vi 1
viewing 1
visual 2
visualization 4
visualizing 11
warehouse 4
warehouses 3
warehousing 10
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wen 4
what 1

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years 1
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